



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,988	10/14/2003	Laurent R. Moll	BP3254	4742
51472 7590 01/25/2007 GARLICK HARRISON & MARKISON P.O. BOX 160727 AUSTIN, TX 78716-0727			EXAMINER NGUYEN, TANH Q	
			ART UNIT 2182	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/684,988	MOLL, LAURENT R.	
	Examiner	Art Unit	
	Tanh Q. Nguyen	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 November 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 and 29-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 and 29-35 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 October 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 1-10, 29-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites "a plurality of peripheral bus interfaces operably coupled to the one or more resources and to couple to a peripheral bus fabric to support resource sharing with a plurality of other processing devices when coupled to the peripheral bus fabric" in lines 3-5. It is not clear what applicant intends to claim because it is not clear whether the plurality of peripheral bus interfaces are coupled to the peripheral bus fabric. Furthermore, "to couple to a peripheral bus fabric" in line 4 appears to be grammatically inconsistent with "operably coupled to the one or more resources" in lines 3-4. It is not clear whether "**to couple** to a peripheral bus fabric" should be replaced with "**coupled** to a peripheral bus fabric" in line 4

Claim 1 also recites "the node ID register also to have one or more override indications" in lines 12-13. The recitation appears to be not consistent with "a node identification (ID) register programmable to have primary routing resources" recited in lines 6-7. It is not clear whether the recitation in lines 12-13 should be replaced with "the node ID register also programmable to have one or more override indications". Note that corresponding claim 29 recites "the override routing also programmed in the

Art Unit: 2182

node ID register" in line 14.

Claim 1 further recites "based upon the destination address **and when a type of transaction** is other than the particular type of transaction **noted for the primary routing**" in lines 15-17. There is insufficient antecedent basis for such recitation in the claim. Note that the recitation in lines 6-11 discloses "to determine a primary routing...being based upon...a particular type of transaction". The particular type of transaction is not "noted" for the primary routing. It appears that applicant meant to recite "based upon the destination address **of the peripheral transaction and a type of transaction** other than the particular type of transaction **used in determining the primary routing**".

4. Claim 7 recites "wherein the alternate override routing is selectively disabled...in which an override disabled transaction is to use the primary routing". It is not clear what applicant intends to claim by an "override disabled transaction". It appears that applicant meant to claim "wherein the alternate override routing is selectively disabled...and to use the primary routing when the alternate override routing is disabled".

5. Claim 9 recites "the overriding routing" in line 3. There is insufficient antecedent basis for the limitation in the claim.

6. Claim 29 recites "based upon the destination address **and when a type of transaction** is other than the particular type of transaction **noted for the primary routing**" in lines 11-14. There is insufficient antecedent basis for such recitation in the claim. Note that the recitation in lines 6-11 discloses "to determine a primary routing...being based upon...a particular type of transaction". The particular type of

transaction is not "noted" for the primary routing. It appears that applicant meant to recite "based upon the destination address of the peripheral transaction and a type of transaction other than the particular type of transaction used in determining the primary routing".

Claim 29 also recites "based on the type of transaction noted for the peripheral bus transaction" on line 17. It appears that applicant meant to recite "based on the type of transaction for the peripheral bus transaction".

Claim 29 further recites "the override routing" in line 14, and in lines 16-17. There is insufficient antecedent basis for such limitation in the claims.

7. Claim 30 recites "The processing device of claim 29", yet claim 29 is directed to "A method of operating a processing device".
8. The rejections that follow are based on the examiner's best interpretation of the claims.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 3-9, 29, 31-35 are rejected under 35 U.S.C. 102(e) as being

anticipated by Beadle et al. (US 7,039,709).

11. As per claim 1, Beadle teaches a processing device [20, FIG. 1; col. 4, lines 48-51] comprising:

one or more resources within a node [col. 4, lines 53-55; col. 1, lines 35-38; col. 1, lines 48-53];

a plurality of peripheral bus interfaces [interfaces to 205, 207, 209, 211 - FIG. 2; interfaces to 305, 307, 309, 311 - FIG. 3; col. 6, lines 46-48] operably coupled to the one or more resources (network adapter 90 and modem 92 [FIG. 1] operably coupled to processors, disk drives, CD ROM, memory devices [col. 1, lines 48-53]), and to couple to a peripheral bus fabric [205, 207, 209, 211, 215 - FIG. 2; 305, 307, 309, 311, 315 - FIG. 3] to support resource sharing with a plurality of other processing devices when coupled to the peripheral bus fabric [col. 4, lines 59-63; col. 5, lines 46-56; col. 6, lines 26-34];

a node ID register [connectivity table: col. 10, lines 24-27] programmable to have primary routing resources with a plurality of addresses to determine a primary routing of a peripheral bus transaction among the plurality of peripheral bus interfaces based upon a destination address of the peripheral bus transaction and a particular type of transaction (e.g. confidential and time sensitive financial information is routed via a primary route via primary routing resources [1001-1005-1009-1011, FIG. 10; col. 9, line 53-col. 10, line 36] with inherent plurality of addresses); and

the node ID register also to have one or more override indications to determine an alternate override routing of peripheral bus transaction among the plurality of

peripheral bus interfaces based upon the destination address and when a type of transaction is other than the particular type of transaction used in determining the primary routing (e.g. general customer data is routed through a route different from the primary route [1001-1003-1007-1011, FIG. 10; col. 9, line 53-col. 10, line 36]).

Note that Beadle also teaches an embodiment in which only a single route may be connected at a given time during a session. In such an embodiment, a first portion of the session with a first data type is routed via a first connection route, and when a new data type is detected, the new data type is routed via an alternate route [col. 10, lines 37-52].

12. As per claim 3, Beadle teaches routing confidential and time sensitive financial information via a primary route (or alternatively the first portion of a session via a primary route) based on contents of the connectivity table (see rejection of claim 1 above), hence ignoring the alternate override routing based upon programmed contents of the node ID register.

13. As per claim 4, Beadle teaches session information being cached and used in an alternate override routing when a session connection is lost [col. 11, lines 6-12], hence the alternate override routing for cache coherency peripheral bus transactions.

14. As per claim 5, Beadle teaches the alternate override routing for input/output peripheral bus transactions - for general customer data or alternatively for the new data type (see rejection of claim 1 above).

15. As per claim 6, see rejections of claims 4-5 above.

16. As per claim 7, Beadle teaches switching to an alternate override routing being

Art Unit: 2182

optional [col. 11, lines 26-32; FIG. 5B], hence the alternate override routing being selectively disabled, and using the primary routing when the alternate override routing is disabled.

17. As per claim 8, Beadle teaches network packets initially routed (i.e. via the primary routing) via a wireless LAN [col. 11, lines '40-43], hence a packet data peripheral bus transaction being initially designated for primary routing.

18. As per claim 9, Beadle teaches the alternate override routing for a peripheral bus transaction to a port of a selected peripheral bus interface (see rejection of claim 1 above).

19. As per claim 29, the claim generally corresponds to claim 1 above and is rejected on the same basis.

20. As per claim 31, Beadle teaches routing confidential and time sensitive financial information via a primary route (or alternatively the first portion of a session via a primary route) based on contents of the connectivity table (see rejection of claim 1 above), hence choosing to route the peripheral bus transaction according to the primary routing based upon programmed contents of the node ID register.

21. As per claim 32-35, the claims generally correspond to claims 4-6, 8 above and are rejected on the same bases.

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2182

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 2, 4, 6-8, 10, 30, 32, 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beadle et al..
24. As per claims 2, 30, Beadle does not teach a node ID of a destination processing device being based upon a set of most significant bits of the destination address of the peripheral bus transaction. Since it was known in the art for a destination address of a transaction over a network to comprise a destination node ID in the most significant bits and other information, and since it was known to use the destination node ID to properly route data through the network, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the destination node ID to be based on the most significant bits of the destination address in order to use the destination node ID to properly route data through the network.
25. As per claims 4, 32, since a cache coherency transaction is an I/O transaction and since applicant did not indicate that it is critical to apply alternate override routing to cache coherency transactions, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply override routing to cache coherency transactions in order to provide alternative paths to the destination.
26. As per claims 6, 34, Beadle teaches the alternate override routing for input/output peripheral bus transactions - for general customer data or alternatively for the new data type (see rejection of claim 1 above), and the alternate override routing for cache coherency peripheral bus transactions (see the 103 rejections of claims 4, 32 above).

27. As per claims 7-8, 35, Beadle also teaches switching to an alternate override routing being optional [col. 11, lines 26-32; FIG. 5B], hence the alternate override routing being selectively disabled, and using the primary routing when the alternate override routing is disabled; and network packets initially routed (i.e. via the primary routing) via a wireless LAN [col. 11, lines 40-43], hence a packet data peripheral bus transaction being initially designated for primary routing.

28. As per claim 10, Beadle does not explicitly teach the elements of each entry in the node ID register. Essentially, Beadle does not teach an override bit and a P/S indication for I/O transactions, and an override bit and P/S indication for cache coherency instructions. Such elements are implementation specific, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to include such elements instead of the connectivity table of Beadle, in order to effect primary routing and alternate override routing.

Response to Arguments

29. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanh Q. Nguyen whose telephone number is 571-272-4154. The examiner can normally be reached on M-F 9:30AM-7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

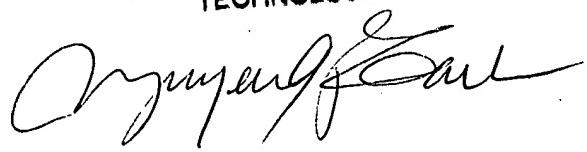
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Application/Control Number: 10/684,988
Art Unit: 2182

Page 11

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TANH Q NGUYEN
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100


January 17, 2007

TQN
January 17, 2007